

A photograph of surgeons in an operating room, wearing masks and headlamps, illuminated by overhead surgical lights. The scene is viewed from a low angle, looking up at the surgeons and the lights.

M | MICHIGAN MEDICINE

**DEPARTMENT
OF SURGERY**

**Advancing Surgeon Excellence.
Training the next generation
of leaders.**

medicine.umich.edu/dept/surgery

THORACIC SURGERY TRAINING

MEDICAL STUDENT OPPORTUNITIES

The Department of Surgery's clinical electives and programs will help prepare medical students as they apply for residency. These opportunities build your surgical expertise and your leadership skills as you prepare for the next step in your training:

- **Visiting Students (VSAS):** We offer clinical electives to visiting fourth year medical students to rotate on the University of Michigan Medical School's fourth-year surgery electives. We coordinate electives in general, vascular, plastic, and cardiothoracic surgery. Please apply through the AAMC VSAS process.
- **Surgery Leadership Weekend:** This program, held in May each year, teaches surgical leadership skills and reviews what you need to know about the surgical residency application process. All U-M medical students going into surgery and select external students are eligible to attend. External student applications are solicited in February and March through emails to clerkship directors and medical school deans.



RESIDENT OPPORTUNITIES

The Department of Surgery is nationally recognized for the excellence of its surgical training programs and consistently attracts outstanding candidates for trainee positions at the house officer and fellowship levels. As a surgery resident or fellow at the University of Michigan, you'll join a department committed to your success. Our residency and fellowship programs emphasize:

- **Mentorship and Multidisciplinary Cross-Training:** You will learn from more than 100 full-time faculty across 20 specialties, including experts in biochemistry, immunology, bioengineering, and physiology. Our residents establish strong mentoring relationships with faculty who are at the top of their field.
- **Michigan Center for Global Surgery:** You will have the opportunity to incorporate global surgery projects into your training experience through the Michigan Center for Global Surgery. Global outreach initiatives across 4 continents focus on long-term, sustainable programs to advance world health policy and research, global health education, and international surgical care.
- **Complex Cases:** Our clinical facilities contain nearly 1,000 beds, and we have more than 16,000 annual operative cases. U-M's status as a state referral center brings patients with unique cases to Michigan Medicine, and patients often travel out of state to be treated here. This means that you'll manage more clinical cases and see more diverse and unusual cases than at other institutions. Additionally, trainees can hone their skills in the advanced Clinical Simulation Center, an American College of Surgeons-certified Level 1 training center that provides adult, pediatric, procedural, and surgical simulators.
- **Academic Development:** Residents conduct clinical, basic science, translational, and outcomes research throughout their training at our research facilities, which span more than 50,000 square feet across the medical campus. In 2017, we ranked #1 for National Institutes of Health funding, with a total of more than \$35 million in extramural support, and we publish more than 900 papers annually. Our residents have unparalleled participation in national conferences. This work is celebrated across the entire Department of Surgery at our annual Moses Gunn Research Conference.

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WHY TRAIN AT MICHIGAN

At the Michigan Medicine Department of Surgery, we're known nationally for excellence in guiding the next generation of surgeons. You'll join a team of more than 100 full-time physicians and scientists who will challenge and support you while you advance to independence in the OR and beyond.

- **Stronger Together:** As a Michigan surgery resident, you'll join a cohort of trainees from the top institutions across the country.
- **Great Cases Come to You:** The size and scope of UM's clinical facilities mean that you'll see more diverse and challenging cases than at other institutions.
- **World-Class Education:** We combine opportunities to learn from world-class leaders with a setting that thrives on collaboration.
- **Inclusive Environment:** You will benefit from a diverse population of patients, faculty and fellow trainees. We are committed to an inclusive environment that recognizes strengths in different backgrounds, skills and abilities.
- **Facilities:** With 3 hospitals, 6 specialty centers, and more than 4.6 million square feet of space supporting research and education, Michigan Medicine facilities offer comprehensive and technologically advanced resources for patients, investigators, and trainees.
- **Life in Ann Arbor:** Ann Arbor combines big-city culture with the natural beauty of Michigan's beaches, forests, and rivers. From mid-summer's Ann Arbor Art Fair to fall football games to skiing in winter, Ann Arbor offers four-season charm with plenty to do.

THORACIC SURGERY TRAINING

MISSION

University of Michigan thoracic surgery training programs provide broad clinical experience, the deep resources of a top academic medical center, and instruction by talented and dedicated surgeon educators for prospective thoracic surgeons.

ADVANCED CLINICAL EXPERIENCE

We offer an integrated 6-year cardiothoracic residency program and a 2-year residency with an optional 1-year fellowship experience.

Highlights include:

- With more than 3,300 clinic visits and performing more than 1,000 operative procedures a year, our thoracic surgery clinical practice provides care for even the most complex chest conditions. We specialize in surgical treatment for diseases of the trachea, lung, mediastinum, diaphragm, and esophagus as well as lung transplantation.
- Our lung transplant program is the largest in Michigan in terms of operative volume.
- We focus on minimally invasive surgery, including one of the most robust thoracic robotic surgery programs in the country.
- We offer a team approach to surgical training with our Cardiac Surgery Department which also performs a high volume of complex cardiac surgeries and is nationally renowned for their adult and congenital cardiac programs.

FACTS & STATS

- Performing 100 plus esophagectomies each year, we're among the highest-volume programs in the country with excellent outcomes.
- Pioneers of the transhiatal esophagectomy, Michigan thoracic surgeons continue to lead in the treatment and research of surgical diseases of the trachea, lung, mediastinum, diaphragm, and esophagus.
- Our team includes 7 thoracic surgeons and 3 research faculty.
- We cultivate a multidisciplinary partnership with our colleagues in anesthesiology, oncology, pulmonary medicine, and gastroenterology that results in the best outcomes for patients and wide-ranging training experience for residents.
- The University of Michigan offered the first residency in thoracic surgery in the United States.

RESEARCH

We apply a multidisciplinary approach to research that spans basic science, translational, health disparities, and outcomes, using what we learn to improve the lives of patients through new technologies, new care paradigms, and new understanding of the underpinnings of devastating diseases like esophageal and lung cancer.

Highlights include:

- Our tumor bank — one of the largest genetic databases of esophageal and lung cancers in the world — informs our insights into the mechanics of cancer progression so that we can ultimately develop better screening tools.
- We're one of the first institutions in the country to use the technique of ex vivo lung perfusion to heal damaged or deconditioned donor lungs so they can be recovered for use as transplant organs. We're currently one of 13 centers nationwide participating in the trial to test this technology and approach.
- We are leaders in the state-wide and national databases on esophageal cancer outcomes that documents metrics for care and clinical quality.
- Using the wealth of data contained within CT scans, we've partnered with our surgical colleagues developing the new field of analytic morphomics, which uses computer algorithms and image analysis to develop predictive models of how patients will fare after an organ transplant or esophageal cancer treatment.

RESOURCES

Michigan Medicine Thoracic Surgery
medicine.umich.edu/thoracic-surgery

Office of Health Equity and Inclusion
ohei.med.umich.edu

University of Michigan Medical School
medicine.umich.edu/medschool/education

Diversity & Inclusion Ambassadors
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MICHIGAN PROMISE ADVANCING SURGEON EXCELLENCE

The Michigan Promise is an unparalleled investment in the advancement of faculty in Michigan Medicine's Department of Surgery.

To ensure that this advancement is realized, the department has committed to:

- Preparing each surgeon to achieve the highest excellence in clinical care, research and education
- Building a diverse and inclusive culture
- Recruiting the best and brightest clinicians and scientists
- Creating innovative strategies for ongoing professional growth and scientific discovery
- Developing the most talented and progressive leaders in academic medicine
- Expanding outreach and service to local, regional, national and global partners

